

REMARKS

Claims 10-26 are pending in this application. Claims 17 and 19 are allowed. By this Amendment, claims 10, 15 and 24 are amended, and claim 27 is added. Reconsideration based on the above amendments and the following remarks is respectfully requested.

I. Claim Rejections Under 35 U.S.C §102

The Office Action rejects claims 15 and 18 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,192,945 to Kusada. The rejections are respectfully traversed.

Regarding claim 15, the Office Action states that Kusada teaches sampling and hold switches that sample the first analog signal A/D converters for converting a first analog signal that is supplied through a corresponding sampling switch, a storage device storing digital signals and D/A converters, each D/A converter converts the data to signal held in the corresponding latches into a second analog through digital signal to be supplied to the plurality of pixels.

However, Applicant respectfully submits that Kusada fails to teach or disclose the first analog signal to be inputted in one horizontal scanning period, as recited in claim 15. The Office Action does not even assert that this feature is disclosed in Kusada. In addition, Kusada fails to disclose or teach in the cited portions of the reference that the second analog signal is supplied to the plurality of pixels. The Office Action asserts that Kusada discloses this feature in col. 23, lines 1-8. However, the cited portion of the reference teaches N latch circuits for converting a train of data into three trains of video signals and D/A converters for converting the latch circuit outputs into analog signals. In addition, the A/D converters and D/A converters in Kusada correspond to RGB colors and not to the number of data lines. Therefore, the A/D converters disclosed in Kusada have to perform multiple times in one horizontal scanning period. However, the A/D converter as recited in claim 15 performs the analog to digital conversion once per one horizontal scanning period.

Regarding claim 18, since claim 18 depends from claim 15, the Applicant respectfully submits that claim 18 is allowable at least for the reasons stated regarding claim 15.

Applicant respectfully submits that Kusada fails to teach or disclose all of the features recited in claims 15 and 18. Accordingly, Applicant respectfully requests that Kusada fails to anticipate claims 15 and 18 under 35 U.S.C. §102(b). Withdrawal of the rejection of claims 15 and 18 under 35 U.S.C. §102(b) is respectfully requested.

II. Claim Rejections Under 35 U.S.C. §103

The Office Action rejects claims 10, 24 and 25 under 35 U.S.C. §103(a) over Kusada in view of U.S. Patent No. 6,034,666 to Kanai. The rejections are respectfully traversed.

Regarding claim 10, the Office Action asserts that Kusada discloses end sampling switches and end A/D converters, and latches, and D/A converters and a switching section that has N pole positions. The Office Action further asserts that although Kusada does not expressly teach that the number of analog to digital converters is similar to the number of digital to analog converters and supplied to switches, that Kanai makes up for this deficiency. The Office Action cites that Fig. 17 of Kanai teaches a display device that includes N analog to digital converters and N latches and N D/A converters. The Office Action further asserts that Fig. 17 of Kanai would have been obvious to include the teachings of Kanai to Kusada so as to simplify the interface with a personal computer as well as to avoid color break up.

Applicant respectfully submits that the cited combination fails to disclose or suggest the features recited in claim 10. Specifically, the cited combination does not teach or suggest N number of sampling switches and each of the A/D converters, converting a first analog signal that is supplied through one respective sampling switch of the N sampling switches.

The cited combination merely discloses a N positioned switching section that merely de-multiplexes N analog signals and is not analogous to or makes obvious, N sampling switches that provide input to N A/D converters on a one-to-one basis.

In addition, the cited references merely disclose that the A/D converters and the D/A converters correspond to RGB colors and not to the number of data lines as recited in claim 10. As a result, the circuit disclosed by the cited references have to perform multiple times in one scanning period and is not efficient in high-speed operation.

Regarding claim 24, the Office Action asserts that the limitations of claim 24 are substantially similar to those of claims 10 and 12 and are analyzed as previously discussed with respect to claims 10 and 12. Applicant respectfully submits that the cited combination fails to teach or disclose all of the features recited in claim 24. Specifically, the cited combination teaches that the A/D converters and the D/A converters are disposed on a circuit board. However, the cited references failed to teach, disclose or suggest that the A/D converters and the D/A converters are disposed on the display substrate as recited in claim 24.

Regarding claim 25, the Office Action states that the limitations of claim 25 are substantially similar to those of claims 10 and 12 and are analyzed as previously discussed with respect to claims 10 and 12. The Applicant respectfully traverses this rejection. The Applicant respectfully submits that the cited references fail to teach or disclose all the features recited in claim 25. Specifically, the cited references teach that the A/D converters and the D/A converters are disposed on the circuit board. However, the cited references fail to teach, disclose or suggest that the A/D converters and the D/A converters are disposed on the display substrate as recited in claim 25.

The Office Action rejects claims 16 and 20-23 under 35 U.S.C. §103(a) as being unpatentable over Kusada in view of U.S. Patent No. 6,256,024 to Maekawa. The rejections are respectfully traversed.

Regarding claim 16, the Office Action states that Kusada teaches all of the limitations of claim 16 except the limitation of having the sampling switches and the D/A converter in

the same substrate. The Applicant respectfully submits that since claim 16 depends from claim 15, that 16 is allowable at least for the reasons stated regarding claim 15.

Regarding claims 20 and 22, the Applicant respectfully submits that since claims 20 and 22 depend from claim 15, that claims 20 and 22 are allowable at least for the reasons stated regarding claim 15.

Regarding claim 21, the Applicant respectfully submits that since claim 21 depends from claim 16, that claim 21 is allowable for at least the reasons stated regarding claim 16.

Regarding claim 23, the Applicant respectfully submits that since claim 23 depends from claim 22, that claim 23 is allowable for the reasons stated regarding claim 22.

Applicant respectfully submits that Kusada and Maekawa fail to teach or suggest all of the features recited in claims 16 and 20-23. Accordingly, Kusada and Maekawa fail to render obvious the subject matter recited in claims 16 and 20-23 under 35 U.S.C. §103(a). Withdrawal of the rejection of claims 16 and 20-23 under 35 U.S.C. §103(a) is respectfully requested.

The Office Action rejects claims 11, 13 and 26 under 35 U.S.C. §103(a) as being unpatentable over Kusada and Kanai in view of Maekawa. The rejections are respectfully traversed.

Regarding claim 11, the Applicant respectfully submits that since claim 11 depends from claim 10, that claim 11 is allowable at least for the reasons stated regarding claim 10.

Regarding claim 13, the Applicant respectfully submits that since claim 13 depends from claim 12, that claim 13 is allowable at least for the reasons stated regarding claim 12.

Regarding claim 26 the Applicant respectfully submits that since claim 26 depends from claim 25, that claim 26 is allowable at least for the reasons stated regarding claim 25.

The Applicant respectfully submits that the cited combination of Kusada, Kanai and Maekawa fails to disclose or suggest all of the features recited in claims 11, 13 and 26.

Accordingly, Kusada, Kanai and Maekawa fails to render obvious, the subject matter recited in claims 11, 13 and 26 under 35 U.S.C. §103(a). Withdrawal of the rejection of claims 11, 13 and 26 under 35 U.S.C. §103(a) is respectfully requested.

In regards of new claim 27, the Applicant respectfully submits that support for claim 27 is found at least on page 8, lines 11-19 of the Specification.

III. Conclusion

In view of the foregoing amendments and remarks, Applicant submits that this Application is in condition for allowance. Favorable reconsideration and prompt allowance of all of claims 10-27 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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